



Tomorrow's Energy Today

for Cities and Counties

Wes Birdsall, architect of Osage, Iowa's energy conservation program, estimates that Osage saves over \$1 million a year by using energy efficiently. The principal beneficiary has been the local economy.

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Energy Efficiency Strengthens Local Economies

Energy efficiency programs can stimulate local economic development. Through energy efficiency, local businesses lower their bills and increase their profits. The money from the savings remains in the local economy and circulates among local merchants.

Wes Birdsall knows how to convince people to save energy. "I simply show them how much *money* they are wasting on energy," he says. Wes recently retired from managing the Osage Municipal Utilities for the last 20 years. During that period, Birdsall estimates that Osage, Iowa, spent a total of \$350,000 on energy conservation. "Today," he says, "the town saves more than \$1 million per year on energy bills."

The principal beneficiary has been the town's economy. Unemployment is half the national average. While most of this country's rural and small-town economies have been struggling, firms are moving to Osage. And according to an economist from the University of Iowa, downtown stores are healthy.

Like Osage, your town can use energy efficiency as part of a program to stimulate local economic development. Energy efficiency affects economic growth because energy is used by every part of a community's economy, including producers, distributors, and marketers of goods and services.

But the all-encompassing effects of energy on your local economy are not always obvious. In general, energy costs have two types of effects—direct and indirect.

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Since 1984, Fox River Mills has reduced the cost of electricity for producing socks from \$0.48 to \$0.34 per dozen. This cost reduction has helped to increase orders from customers.

Energy Costs Have a Direct Effect on Local Businesses

Energy costs directly affect the balance sheet of all businesses in your community. In Osage, energy costs have proven to be very important to the largest employer, a medium-sized textile manufacturer called Fox River Mills. The company produces socks for the sporting goods industry. Working with Wes Birdsall, Fox River has reduced the energy costs of producing a pair of socks by 29% since 1984. The factory produces 10 million pairs of socks each year, so savings have added up quickly.

The cost reduction has contributed to increased productivity and increased orders from customers. To meet the demand, the plant owners have twice expanded the size of the plant and added another shift. The mill, which employed 110 workers in 1984, employs 310 people today.

Energy Costs Also Indirectly Affect the Health of Local Economies

Less obvious is the indirect effect energy dollars have on the overall health of your local economy. For example, dollars spent on energy efficiency stimulate more economic activity and create more jobs than do the payments of energy bills. This is because most of the payments for energy efficiency programs go to people who live and do business in the same community. Programs aimed at conserving energy in buildings involve local construction contractors who, in turn, buy much of their equipment and materials from local vendors.

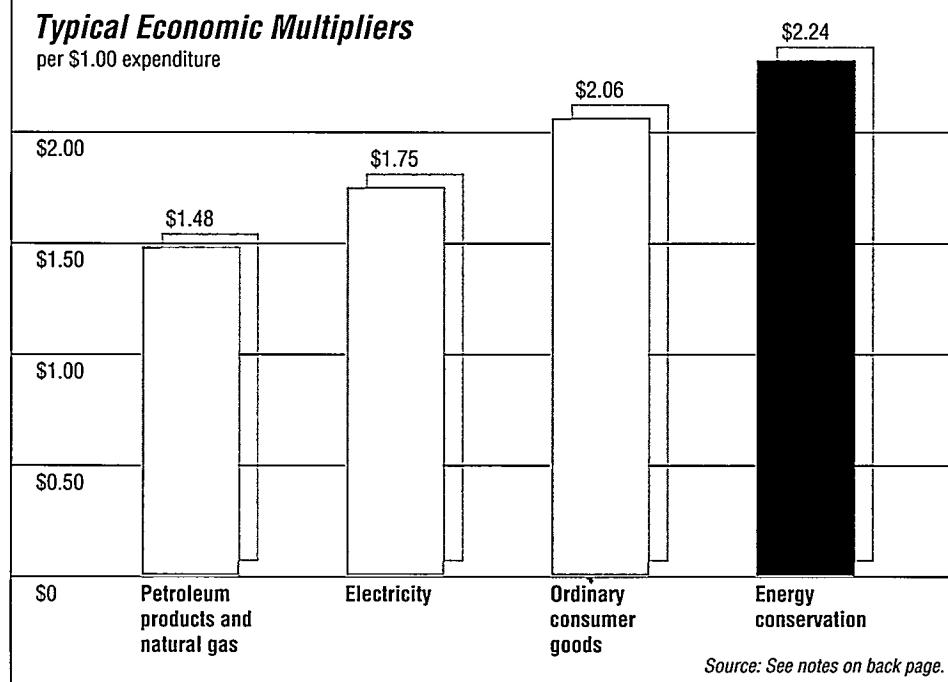
On the other hand, payments for energy bills stimulate less economic activity in local communities than most other types of spending. Economists for the State of Nebraska estimate that 80% of every dollar spent on energy bills leaves the state economy without generating further economic activity.

Economists refer to the "economic multiplier" as a measure of how much economic activity can be generated in a community by different types of investments. For example, a \$1.00 purchase of ordinary consumer goods in a local store generates \$2.06 of economic activity in your local economy. (The store hires local workers, who, in turn, shop at local stores, etc. See notes on back page.) The economic multiplier provides a way to compare the relative value of different types of investments (or payments).

By contrast, compare the economic multiplier for payments of energy bills with the multipliers for energy conservation and energy efficiency. Payments for petroleum products (such as gasoline) or natural gas have an economic multiplier of \$1.48; for

Typical Economic Multipliers

per \$1.00 expenditure



For every \$1.00 spent, energy conservation stimulates \$0.76 more activity in local economies than does payment of energy bills for petroleum or natural gas.



Most local business people need technical input for them to make these decisions rationally. Engineers hired by the municipal utility performed the audits for the industrial firms in Osage.

In the case of Fox River Mills, the audit provided a spark that started the mill looking seriously at reducing energy consumption. After carrying out some of the suggestions of the audit, such as adding insulation, the mill hired its own experts from the textile industry to help it streamline its production facilities and reduce energy. For example, the mill owners replaced its 220-volt motors with high-efficiency type 440-volt motors to run their knitting machines.

According to John Lessard, Fox River Mills President, the increase in energy efficiency was accomplished through sensible investments. He said, "I don't think we've done anything that hasn't paid back in less than a couple of years."

Low-cost loans helped Osage's businesses pay for energy-efficient measures. Usually, the loans were for projects that pay back the loan principal from the energy savings within a few years.

As a result of the energy efficiency program, per capita electricity consumption in Osage is 25% less than that for the rest of Iowa. In fact, the Osage utility has been able to reduce electricity rates by 19% during the last 8 years and natural gas rates by 5% during the last 5 years. The average home owner saves almost \$200 a year in energy bills, and many local businesses save much more.

The Osage Municipal Utilities have provided energy audits to virtually every business in town. The audits have shown the business owners where they can make the most cost-effective investments to use energy more efficiently.

electricity, the multiplier is \$1.75; and for energy conservation, the economic multiplier is \$2.24. Thus, for every \$1.00 spent, energy conservation and energy efficiency generate \$0.76 more economic activity in local economies than do the payment of bills for petroleum products or natural gas.

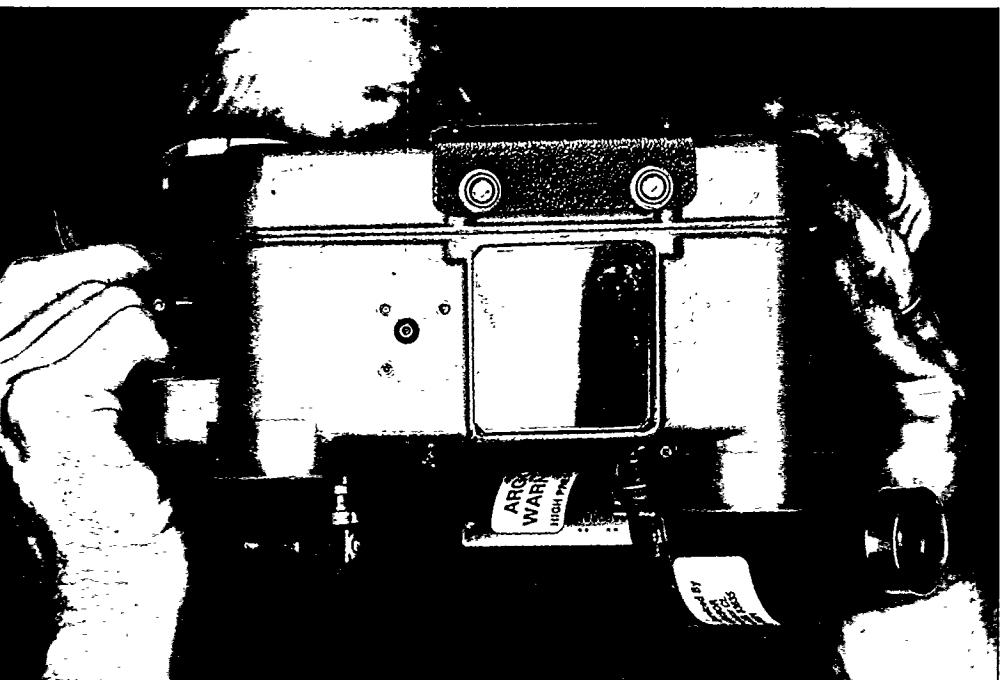
Osage Prospers from Energy Efficiency

The energy efficiency program in Osage has helped meet the needs of local businesses by providing technical assistance and low-cost loans.

Osage's municipally owned utility has provided an energy audit at no cost to nearly every business in town. The audits are valuable to the business owners because the audits have shown the owners the best opportunities for energy savings in their particular organization. For example, does adding insulation make sense? Or could a better investment in energy efficiency be made in the heating and cooling or lighting systems?

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The lower utility rates improve the business climate and help attract new business to Osage. For example, a paper factory and a national computer services company recently located subsidiaries there. Kevin Drake, the manager of the new Osage branch of the Wallace Computer Services Co., said recently, "We looked at more than 50 towns before deciding to locate in Osage. Its energy conservation program was one of the things we considered when making our decision."



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"One of the most effective things we did was to take an infrared scanner into many local buildings," says Wes Birdsall. "When we showed people on the scanner how much energy they were losing, they usually were on the phone to a contractor before we could get out the door."

Osage's experience with energy efficiency confirms that each dollar spent on energy efficiency by local businesses produces multiple benefits. Increasing energy efficiency directly increases the profitability of local businesses. It indirectly increases the demand for local goods and services and creates jobs for local residents. And it can help attract new business to the area. Increasing energy efficiency can be an effective tool for strengthening your local economy.

Osage's energy program was started almost 20 years ago. Your city and county can start one today. ■

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Notes: The economic multipliers were provided by Skip Laitner, Principal, Economic Research Associates, 1205 Collingwood Road, Suite 100, Alexandria, VA 22308-1729, (703) 780-6407, email: EconSkip@aol.com.

Each community will have economic multipliers for energy and other commodities that are specific to that economic region. For examples of other studies of economic multipliers, see The Hidden Link: Energy and Economic Development, Phase I: Strategic Planning, published by the Urban Consortium Energy Task Force and partially sponsored by the U.S. Department of Housing and Urban Development (HUD) and DOE, No. DG/86-310 04/87-500; it is available from Public Technology, Inc.

27
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